

# Supplemental Type Certificate

## Number SA92NW

**This certificate, issued to:** Cub Crafters, Inc.  
1918 S. 16<sup>th</sup> Ave.  
Yakima, WA 98903

**certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 3 of the Civil Aviation Regulations.**

**Original Product—Type Certificate Number:** 1A2

**Make:** Piper

**Model:** PA-18, -18S, -18 "105", -18S "105", -18A, -18 "125",  
-18S "125", -18AS "125", -18 "135", -18A "135",  
-18S "135", -18AS "135", -18 "150", -18A "150",  
-18S "150", -18AS "150", -19, -19S

**Description of the Type Design Change:** Installation of Lycoming 0-360 series engine, McCauley, Sensenich Propeller Manufacturing Co., or Sensenich Wood Propeller Co, Inc. propeller and associated hardware per Cub Crafters, Inc. Master Drawing List 101000-MDL, Revision U, dated February 27, 2004, or later FAA approved revision.

**Limitations and Conditions:** Approval of this change in type design applies to the above model aircraft only. This approval should not be extended to other aircraft on which other previously approved modifications are incorporated unless it is determined by the installer that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that aircraft. A copy of this Certificate and FAA Approved Flight Manual Supplement Report CR-101000-5, Revision D, dated March 1, 2004, or later FAA approved revision, must be maintained as part of the permanent records for the modified aircraft.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

(See Continuation Pages 3-4)

**This certificate and the supporting data which is the basis for approval shall remain in effect until sur-rendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.**

**Date of application:** February 6, 1974

**Date reissued:** July 14, 1994

**Date of issuance:** March 1, 1974

**Date amended:** 3/5/1974; 12/10/1975; 7/29/1996;  
12/19/2002; 3/1/2004; 4/6/2004



**By direction of the Administrator**

(Signature)

Acting Manager, Seattle Aircraft  
Certification Office

(Title)

UnitedStatesofAmerica

DepartmentofTransportation\_FederalAviationAdministration

# Supplemental Type Certificate

(Continuation Sheet)

## Number SA92NW

**Cub Crafters, Inc.**

Reissued: July 14, 1994

Amended: 3/5/1974; 12/10/1975; 7/29/1996;

12/19/2002; 3/1/2004; 4/6/2004

**Limitations and Conditions (continued):**

The conditions and limitations of Type Certificate Data Sheet Number 1A2 apply except where superceded by the following:

This Supplemental Type Certificate Data Sheet, which is part of STC SA92NW, prescribes the conditions and limitations under which the product for which the STC was issued meets the airworthiness requirements of the Federal Aviation Regulations:

**Models:**

PA18 (1)	PA18S-125 (2)	PA18-150 (1)	PA18A (1)
PA18AS-125 (2)	PA18A-150 (1)	PA18S (2)	PA18-135 (1)
PA18S-150 (2)	PA18-105 Special (1)	PA18A-135 (1)	PA18AS-150 (2)
PA18S-105 Special (2)	PA18S-135 (2)	PA19 (1)	PA18-125 (1)
PA18AS-135 (2)	PA19S (2)		

(1) Normal and utility category (2) Normal category only

Engine: Lycoming O-360 A or C series with Marvel Schebler MA4-5 carburetor.

Engine Limits: For all operations, 2700 RPM.

Fuel: 100 minimum grade aviation gasoline - 34.4 gallons usable in all flight conditions. "Both" fuel selector position is required for takeoff and landing.

Propeller: Sensenich Propeller Manufacturing Co. 76EM8-0-52 to 56  
76.0 Inches minimum diameter  
76.0 Inches maximum diameter

Static limits: Maximum 2450 RPM  
Minimum 2350 RPM

Propeller: Sensenich Wood Propeller Co., Inc. W80CM8  
80.0" Minimum diameter  
80.0" Maximum diameter

Static limits: Maximum 2450 RPM  
Minimum 2250 RPM

For Lycoming O-360 series engines with hollow crankshafts (excludes engines with suffixes having a digit "4" or higher in the second position) the following applies:

Avoid continuous operation between 2150 and 2350 RPM

Propeller: McCauley 1A200/FA8240 to 45  
78.0 inches Minimum diameter  
82.0 inches Maximum diameter

Static Limits: Maximum 2450 RPM  
Minimum 2300 RPM

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*Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.*

*This certificate may be transferred in accordance with FAR 21.47.*



Department of Transportation Federal Aviation Administration  
**Supplemental Type Certificate**  
(Continuation Sheet)  
**Number SA92NW**

**Cub Crafters, Inc.**

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12/19/2002; 3/1/2004; 4/6/2004

**Limitations and Conditions (continued):**

Powerplant Instrument Markings:

Oil temperature:		Oil Pressure:	
Red radial	40 deg F and 245 deg F	Red radial	25 psi and 100 psi
Green Arc	120 deg F to 245 deg F	Green arc	60 psi to 85 psi
Yellow Arc	40 deg F to 120 deg F	Yellow arc	25 psi to 60 psi, and 85 psi to 100 psi.

Tachometer:

For all engine and propeller combinations except a Lycoming O-360 engine with a hollow crankshaft mounting a Sensenich 76EM8-0-52 propeller:

Red radial 2700 RPM  
Green arc 500 - 2700 RPM

For a Lycoming O-360 engine with a hollow crankshaft mounting a Sensenich 76EM8-0-52 propeller:

Red radial 2700 RPM  
Red arc 2150 - 2350 RPM  
Green arc 500 - 2150 RPM and 2350-2700 RPM

Loading:

Maximum weight (takeoff and landing) 1750 lb (Normal category)  
1500 lb (Utility category)

Center of gravity range, aft of wing leading edge

Normal category	Utility category
(+14.0) to (+20) at 1750 pounds	(+12.3) to (+19.0) at 1500 pounds
(+10.5) to (+20) at 1300 pounds or less	(+10.5) to (+19.0) at 1300 pounds or less

Straight line variation between points given.

Maximum baggage allowed: 50 pounds

Noise Level:

For the Piper Super Cub as modified by Cub Crafters with the McCauley 1A200/FA8242 propeller installed, the FAR Part 36 Appendix G and ICAO Annex 16 Chapter 10 certification noise level is 78.9 dB with a 90% confidence level of 0.5 dB for the 1750 lb configuration, and 78.6 dB with a 90% confidence level of 0.5 dB for the 2000 lb configuration. With the Sensenich Propeller Manufacturing Co. 76EM8-0-54 propeller installed, the certification noise level is 73.9 dB with a 90% confidence level of 0.3 dB for the 1750 lb configuration, and 73.6 dB with a 90% confidence level of 0.3 dB for the 2000 lb configuration. The noise level for the Sensenich Wood Propeller W80CM8 is between 78.6 dB and 73.6 dB in the 2000 lb. configuration.

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